

CLAIMS

1. A production method of a biogas, the method comprising:

5 a first step of determining, according to a correlation between a concentration of a predetermined substrate in a liquid to be processed containing an organic matter and a rate of consumption of the substrate by a hydrogen-fermenting microorganism, a maximum tolerable concentration of the substrate consumable by the hydrogen-fermenting microorganism; and

10 a second step of generating a biogas mainly composed of hydrogen by causing the hydrogen-fermenting microorganism to hydrogen-ferment the liquid to be processed while keeping the substrate in the liquid to be processed at a concentration not higher than the maximum tolerable concentration.

15 2. A production method of a biogas according to claim 1, wherein the substrate is a glucide.

20 3. A production method of a biogas according to claim 1 or 2, further comprising a third step of generating a fermentation gas mainly composed of methane by causing a methane-fermenting microorganism to methane-ferment the fermented liquid after the hydrogen fermentation in the second step.

25 4. A production method of a biogas, the method comprising the step of generating a biogas mainly composed of hydrogen by performing hydrogen fermentation while adding a hop or hop component to a liquid to be processed containing an organic matter so as to inactivate a contaminant microorganism inhibiting hydrogen

generation without affecting a growth or activity of a hydrogen-fermenting microorganism.